

REMARKS

Submission of Priority Document

On April 11, 2002, pursuant to the provisions of 35 U.S.C. § 119, and 37 C.F.R. § 115, Applicant claimed the right of priority based upon Chinese application no. 090221767, filed December 13, 2001. A certified English translation of Applicant's priority document is submitted herewith. Acknowledgment of receipt of this document is respectfully requested.

Claim Rejections

Claims 19-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of Lin et al. (U.S. 6,660,138; U.S. application serial no. 10/076,289) in view of Perline (U.S. 5,099,216). Claims 27-35 are rejected the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of Lin et al. (U.S. 6,660,138) in view of Perline, Aiura (EP 951960) and Sakata et al. (U.S. 4,561,185). Claims 19-22, 25 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorincz et al. (U.S. 5,958,195) in view of Perline. Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorincz et al. in view of Perline as applied to claims 19-22, 25 and 26 above, and further in view of Lin et al. Claims 27-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorincz et al. in view of Perline as applied to claims 19-22, 25 and 26 above, and further in view of Aiura et al. and Sakata et al.

Double Patenting

Pursuant to 37 C.F.R. § 1.321(c), a Terminal Disclaimer for claims 19-35 is submitted herewith. Acknowledgment of receipt of this document is respectfully requested.

Applicant respectfully traverses the rejection of claims 23 and 24 as being rendered obvious by Lorincz et al. taken in view of Perline and further in view of Lin et al. (6,660,138). Applicant submits that Lin et al. '138 is not "prior art" under any

section of 35 U.S.C. §102 with respect to the instant application. 35 U.S.C. §102 (e)(1) requires that a published application be by another filed in the United States before the invention by the Applicant for a patent. Applicant notes that the published application to Lin et al. was not filed in the United States until February 19, 2002, a date that is subsequent to the Applicant's date of invention on the record of this application, which is Applicant's priority date of December 13, 2001. In the instant application, Applicant has perfected the claim to priority by filing a certified copy of Taiwan application no. 090221767. Thus, it is believed to be quite evident that Lin et al. is not "prior art" under 35 U.S.C. § 102 and, therefore, cannot be used as prior art in a rejection made under 35 U.S.C. § 103. The outstanding rejection of claims 23 and 24 as being rendered obvious by Lorincz taken in view of Perline and Lin et al. is respectfully traversed.

Claim Amendments

By this Amendment, Applicant has canceled claims 23 and has amended claims 19 and 27 to this application. It is believed that the amended claims now specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

The primary reference to Lorincz et al. discloses a tube inner surface electropolishing device including a flexible electrode (18) inserted into a tube (14). The flexible electrode includes an electric cable (80), a plurality of star-shaped insulators (604), and a plurality of electrodes (512).

On page 8 of the outstanding Office Action, the Examiner admits that "Lorincz et al. do not teach a fixed magnet mechanism attached to the electrode and placed between two of the partitions, nor a driving apparatus having a plural outer electromagnets nor an axial drive mechanism for moving the driving apparatus." On page 11 of the outstanding Office Action, the Examiner admits that Lorincz et al. "do not teach that there is a screw mechanism attached on an end of the electrode assembly for removing air bubbles." On page 11 of the outstanding Office Action, the Examiner admits that Lorincz et al. "do not teach plural closed fillisters being

placed on the second partition, wherein the fillister includes a flexible element and a protruding object supporting an abrasive for grinding the inner surface.”

Lorincz et al. do not teach a fixed magnet mechanism having a plurality of fixed magnets, each of the plurality of fixed magnets positioned with a long side parallel with an axis of the tube; a driving apparatus connected to a second power supply and having a plurality of outer electromagnets positioned around an outer periphery of the tube, the plurality of outer magnets generates an electromagnetic force that positions the electrode within the tube and rotates the fixed magnet mechanism and the first and the second partitions on the axis of the tube; teach the axial movement of the driving apparatus and the rotation of the fixed magnet mechanism and the first and the second partitions are performed simultaneously; nor do Lorincz et al. each flexible element pressing one abrasive of the protruding object outwardly toward the inner surface of the long tube for grinding.

The secondary reference to Perline teaches a magnetically levitated apparatus including electrode magnets (12), a manipulator (14), a programmable control means (82), a precision work space (16), and a process material (18). The electrode magnets include a top set of electrode magnets (22) and a bottom set of electrode magnets (26).

On page 11 of the outstanding Office Action, the Examiner admits that Perline does “not teach that there is a screw mechanism attached on an end of the electrode assembly for removing air bubbles.” On page 11 of the outstanding Office Action, the Examiner admits that Lorincz et al. does “not teach plural closed fillisters being placed on the second partition, wherein the fillister includes a flexible element and a protruding object supporting an abrasive for grinding the inner surface.”

Perline does not teach a fixed magnet mechanism having a plurality of fixed magnets, each of the plurality of fixed magnets positioned with a long side parallel with an axis of the tube; at least two partitions including first and second partitions, the fixed magnet mechanism located between and axially aligned with the first and the second partitions; a cable connected to a first power supply; at least one electrode connected at a first end to the cable and at a second end to the first partition, the at least one electrode located in an interior of the long tube, the cable

providing a direct current to the at least one electrode; a driving apparatus connected to a second power supply and having a plurality of outer electromagnets positioned around an outer periphery of the tube, the plurality of outer magnets generates an electromagnetic force that positions the electrode within the tube and rotates the fixed magnet mechanism and the first and the second partitions on the axis of the tube; an axial driven mechanism moves the driving apparatus along the axis of the tube, the axial movement of the driving apparatus and the rotation of the fixed magnet mechanism and the first and the second partitions are performed simultaneously; nor does Perline teach each flexible element pressing one abrasive of the protruding object outwardly toward the inner surface of the long tube for grinding.

The secondary reference to Aiura et al. discloses an apparatus for polishing an inner surface for a cylindrical work piece including a fixed chuck (13) for fixing a long sized cylindrical work piece (W), electrodes (35, 36), a holder (39) positioned within openings in the electrodes, and elastic grind stones (37, 38) positioned within the holders.

On page 6 of the outstanding Office Action, the Examiner admits that Aiura et al. "do not teach the composition of the abrasive".

Aiura et al. do not teach a fixed magnet mechanism having a plurality of fixed magnets, each of the plurality of fixed magnets positioned with a long side parallel with an axis of the tube; at least two partitions including first and second partitions, the fixed magnet mechanism located between and axially aligned with the first and the second partitions; nor do Aiura et al. teach a screw structure connected to the second partition opposite the fixed magnet mechanism; the screw structure is selected from the group consisting of a propeller and a screw slideway.

Aiura et al. teach a fixed chuck for holding a cylindrical work piece, but does not teach a driving apparatus connected to a second power supply and having a plurality of outer electromagnets positioned around an outer periphery of the tube, the plurality of outer magnets generates an electromagnetic force that positions the electrode within the tube and rotates the fixed magnet mechanism and the first and the second partitions on the axis of the tube.

Aiura et al. teach an elastic grind stone extending from an electrode, but does not teach each of the plurality of fillisters having a flexible element and a protruding object with an abrasive; nor do Aiura et al. teach each flexible element pressing one abrasive of the protruding object outwardly toward the inner surface of the long tube for grinding.

The secondary reference to Sakata et al. discloses a measuring instrument including an outer tube (72) with a spring retaining groove (77), a cylindrical thimble (76) positioned on an outer periphery of the outer tube, and a right-handed rotation coil spring (78) for providing a constant pressure between the outer tube and the cylindrical thimble.

Sakata et al. do not teach a fixed magnet mechanism having a plurality of fixed magnets, each of the plurality of fixed magnets positioned with a long side parallel with an axis of the tube; at least two partitions including first and second partitions, the fixed magnet mechanism located between and axially aligned with the first and the second partitions; at least one electrode connected at a first end to the cable and at a second end to the first partition, the at least one electrode located in an interior of the long tube, the cable providing a direct current to the at least one electrode; a driving apparatus connected to a second power supply and having a plurality of outer electromagnets positioned around an outer periphery of the tube, the plurality of outer magnets generates an electromagnetic force that positions the electrode within the tube and rotates the fixed magnet mechanism and the first and the second partitions on the axis of the tube; an axial driven mechanism moves the driving apparatus along the axis of the tube; a screw structure connected to the second partition opposite the fixed magnet mechanism; nor do Sakata et al. teach the screw structure is selected from the group consisting of a propeller and a screw slideway.

Sakata et al. teach a coil spring (78) pressing against an outer tube (72) and a thimble (76), but do not teach each of the plurality of fillisters having a flexible element and a protruding object with an abrasive; the abrasive of the protruding object extending outwardly beyond the outer periphery of the second partition and contacting the inner surface of the long tube for grinding; nor do Sakata et al. teach

each flexible element pressing one abrasive of the protruding object outwardly toward the inner surface of the long tube for grinding.

Even if the teachings of Lorincz et al., Perline, Aiura, and Sakata et al. were combined, as suggested by the Examiner, the resultant combination does not suggest: 1) a screw structure connected to the second partition opposite the fixed magnet mechanism (claim 19); nor does the combination suggest 2) each flexible element pressing one abrasive of the protruding object outwardly toward the inner surface of the long tube for grinding (claim 27).

It is a basic principle of U.S. patent law that it is improper to arbitrarily pick and choose prior art patents and combine selected portions of the selected patents on the basis of Applicant's disclosure to create a hypothetical combination which allegedly renders a claim obvious, unless there is some direction in the selected prior art patents to combine the selected teachings in a manner so as to negate the patentability of the claimed subject matter. This principle was enunciated over 40 years ago by the Court of Customs and Patent Appeals in In re Rothermel and Waddell, 125 USPQ 328 (CCPA 1960) wherein the court stated, at page 331:

The examiner and the board in rejecting the appealed claims did so by what appears to us to be a piecemeal reconstruction of the prior art patents in the light of appellants' disclosure. ... It is easy now to attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of the claims, it is not the type of rejection which the statute authorizes.

The same conclusion was later reached by the Court of Appeals for the Federal Circuit in Orthopedic Equipment Company Inc. v. United States, 217 USPQ 193 (Fed.Cir. 1983). In that decision, the court stated, at page 199:

As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be

non-obvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

In In re Geiger, 2 USPQ2d, 1276 (Fed.Cir. 1987) the court stated, at page 1278:

We agree with appellant that the PTO has failed to establish a *prima facie* case of obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.

Applicant submits that there is not the slightest suggestion in either Lorincz et al., Perline, Aiura, or Sakata et al. that their respective teachings may be combined as suggested by the Examiner. Case law is clear that, absent any such teaching or suggestion in the prior art, such a combination cannot be made under 35 U.S.C. § 103.

Neither Lorincz et al., Perline, Aiura, nor Sakata et al. disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious Applicant's new claims.

Summary

In view of the foregoing, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should the Examiner not be of the opinion that this case is in condition for allowance, it is requested that this amendment be entered for the purposes of appeal, since it materially reduces the issues on appeal by cancelling claim 23, thereby rendering moot the outstanding rejection of this claim under 35 U.S.C. § 112, second paragraph.


It is not believed that the foregoing amendments to claim 19 requires any further searching and/or consideration on the part of the Examiner, since such amendment merely includes incorporating the language of canceled claim 23 into claim 19. Thus, the Examiner would have inherently searched the subject matter during the previous consideration of claim 23.

Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

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